

OIB - HU-25C Guardian 07/14/16 Science Report

Aircraft:

[HU-25A Guardian #525](#) ([See full schedule](#))

Date:

Thursday, July 14, 2016

Mission:

OIB

Mission Location:

Arctic Ocean

Mission Summary:

This line was designed to continue to provide broad geographic coverage for the campaign while entering into a consolidated area of the ice pack, it took advantage of a small hole in the clouds which was forecast to close up shortly after we finished up the mission. We also targeted a cluster of buoys from the University of Washington, and under-flew a CryoSat-2 orbit which passed over at 22:34Z just before we finished the survey line.

We encountered clouds after descending to the first line towards the buoys, some small gaps were seen in the clouds at times which increased in frequency and transitioned to generally clear skies as we closed in towards the buoy location. The ice in this area was largely consolidated with lots of melt ponds on the surface with much good data was during this line.

The first pass across the buoys was conducted at 21:01Z, a second pass over the buoy location was done at 21:06Z, these were conducted under mostly clear skies. Remnants of human activity with orange and brown material were seen from the aircraft near the buoy site.

The cloud cover increased along the line between the cluster of buoys and CryoSat-2 track, given the nearly solid concentration of clouds towards the end of the line we cut it short about 30 nm and proceeded to the second waypoint (3224B) along the CryoSat-2 orbit. We entered the CryoSat-2 orbit at 21:51Z, a short time before the satellite passed overhead. Cloud cover was heavy initially and no laser returns were obtained. The clouds began to clear enough about a third of the way down the line for some data to be collected, with more frequent gaps in the clouds towards the final third of the line.

Data volume

ATM: 10 Gb

FLIR: 5 Gb

DMS: 37.9 Gb, 7631 frames

Submitted by:

Nathan T. Kurtz on 07/14/16

File:

 [buoy_farm1.pdf](#)

Related Flight Report:

HU-25A Guardian #524 07/14/16

Flight Number:

OIB 2016 on HU25A #6

Payload Configuration:

ATM and DMS

Nav Data Collected:

No

Total Flight Time:

3.5 hours

Submitted by:

Richard Yasky on 07/14/16

Flight Segments:

From:	PABR	To:	PABR
Start:	07/14/16 19:43 Z	Finish:	07/14/16 23:15 Z
Flight Time:	3.5 hours		
Log Number:	16F003	PI:	Nathan Kurtz

Funding Source:	Thomas Wagner - NASA - SMD - ESD Cryosphere & International Polar Year
Purpose of Flight:	Science
Comments:	OIB Barrow science flight number two. Flew low level portion over a group of 4 ice pack buoys and then attempted a Cryostat under flight. Weather was extensive areas of low altitude clouds from about 1000 feet to the surface with occasional clear sky breaks that allowed good data collections for both instruments.

Flight Hour Summary:

	16F003
Flight Hours Approved in SOFRS	121.25
Total Used	126.9
Total Remaining	-5.65

16F003 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
06/29/16	OIB 2016 on HU25A ICF	Science	2	2	119.25
07/11/16	OIB 2016 on HU25A #1	Ferry	2.6	4.6	116.65
07/11/16	OIB 2016 on HU25A #2	Ferry	2.5	7.1	114.15
07/11/16 - 07/12/16	OIB 2016 on HU25A #3	Ferry	2.2	9.3	111.95
07/12/16 - 07/13/16	OIB 2016 on HU25A #4	Ferry	2.6	11.9	109.35
07/13/16	OIB 2016 on HU25A #5	Science	3.4	15.3	105.95
07/14/16	OIB 2016 on HU25A #6	Science	3.5	18.8	102.45
07/15/16	OIB 2016 on HU25A #7	Science	3.7	22.5	98.75
07/19/16 - 07/20/16	OIB 2016 on HU25A #8	Science	3.6	26.1	95.15
07/20/16	OIB 2016 on HU25A #9	Science	3.4	29.5	91.75
07/21/16	OIB 2016 on HU25A #10	Science	3.6	33.1	88.15
07/22/16	OIB 2016 on HU25A #11	Ferry	3.9	37	84.25
07/22/16	OIB 2016 on HU25A #12	Ferry	3.2	40.2	81.05
07/22/16	OIB 2016 on HU25A #13	Ferry	2.1	42.3	78.95
08/23/16	OIB 2016 on HU-25 #14	Science	2.3	44.6	76.65
08/25/16	OIB 2016 on HU-25 #15	Ferry	3.2	47.8	73.45
08/25/16	OIB 2016 on HU-25 #16	Ferry	2.2	50	71.25
08/27/16	OIB 2016 on HU-25 #17	Science	3.7	53.7	67.55
08/29/16	OIB 2016 on HU-25 #18	Science	3.8	57.5	63.75
08/29/16	OIB 2016 on HU-25 #19	Science	3.5	61	60.25

09/01/16	OIB 2016 on HU-25 #20	Science	3.4	64.4	56.85
09/02/16	OIB 2016 on HU-25 #21	Science	3.8	68.2	53.05
09/02/16	OIB 2016 on HU-25 #22	Science	3.8	72	49.25
09/05/16	OIB 2016 on HU-25 #23	Science	0.6	72.6	48.65
09/06/16	OIB 2016 on HU-25 #24	Science	3.5	76.1	45.15
09/09/16	OIB 2016 on HU-25 #25	Science	3.5	79.6	41.65
09/09/16	OIB 2016 on HU-25 #26	Science	3.5	83.1	38.15
09/10/16	OIB 2016 on HU-25 #27	Science	3	86.1	35.15
09/11/16	OIB 2016 on HU-25 #28	Science	3.9	90	31.25
09/11/16	OIB 2016 on HU-25 #29	Science	3.7	93.7	27.55
09/12/16	OIB 2016 on HU-25 #30	Science	3.3	97	24.25
09/12/16	OIB 2016 on HU-25 #31	Science	2.7	99.7	21.55
09/13/16	OIB 2016 on HU-25 #32	Science	4	103.7	17.55
09/13/16	OIB 2016 on HU-25 #33	Science	2.9	106.6	14.65
09/15/16	OIB 2016 on HU-25 #34	Science	3.7	110.3	10.95
09/16/16	OIB 2016 on HU-25 #35	Ferry	2.4	112.7	8.55
09/16/16	OIB 2016 on HU-25 #35	Ferry	1.7	114.4	6.85
09/16/16	OIB 2016 on HU-25 #35	Ferry	1.7	116.1	5.15
09/17/16	OIB 2016 on HU-25 #38	Ferry	2.8	118.9	2.35
09/17/16	OIB 2016 on HU-25 #38	Ferry	2.9	121.8	-0.55
09/19/16	OIB 2016 on HU-25 #40	Ferry	2.5	124.3	-3.05
09/19/16	OIB 2016 on HU-25 #40	Ferry	2.6	126.9	-5.65

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

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